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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,682	03/09/2001	Bo Kyung Kim	P-185	3267

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EXAMINER HOM, SHICK C	
ART UNIT 2666	PAPER NUMBER

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801,682

Applicant(s)

KIM, BO KYUNG

Examiner

Shick C Hom

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2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/9/01, 2/23/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11 line 1 which recite "the transmission" lacks clear antecedent basis because no transmission have been previously recited in the claims and therefore the limitation is not clearly understood; further it is not clear as to whether it is reciting ---the transmitted--- as in claim 9 line 3.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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3. Claims 1, 3-5, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Weerackody et al. (6,157,612).

Regarding claim 1:

Weerackody et al. disclose the apparatus for re-transmitting erroneous packet data in a communication system, comprising: a buffer coupled to store transmitted data; a controller configured to control the buffer to allow a data re-transmission function to be carried out (see col. 7 lines 26-31 which recite re-transmitting erroneous packet including the buffer for storing packet for retransmission, and the controller for re-transmission); and a radio frequency unit configured to transmit the data (see col. 8 lines 5-13 which recite transmission being over a wireless communication medium).

Regarding claim 3:

Weerackody et al. disclose wherein the buffer is adapted to store a final data frame (see col. 12 lines 1-8 which recite the frame including the end of image marker).

Regarding claim 4:

Weerackody et al. disclose wherein the controller is adapted to transmit only data that has been previously transmitted with errors (see col. 7 lines 26-31).

Regarding claim 5:

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Weerackody et al. disclose wherein the communication system is a wireless local loop (see col. 8 lines 5-13).

Regarding claim 10:

Weerackody et al. disclose wherein the transmitted data stored in the buffer is re-transmitted from the buffer if a negative acknowledgment is received (see col. 7 lines 26-31).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 11, 12, 16-21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weerackody et al. (6,157,612) in view of Sourani (6,631,132).

Regarding claim 12:

Weerackody et al. disclose the method for re-transmitting erroneous packet data, comprising: re-transmitting the data stored in the buffer if no acknowledgment signal is received within a prescribed period of time or if a negative

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acknowledgment signal is received (see col. 7 lines 26-31 which recite re-transmitting erroneous packet including the buffer for storing packet for re-transmission, and re-transmission being responsive to the negative acknowledgement).

Regarding claim 20:

Weerackody et al. disclose the method of re-transmitting data in a communication system, comprising: storing the transmitted data in a physical layer buffer of the transmitting terminal; and re-transmitting the stored data from the buffer if the transmission is faulty (see col. 7 lines 26-31 which recite re-transmitting erroneous packet including the buffer for storing packet for re-transmission, and re-transmission being responsive to error in the packet, i.e. faulty transmission).

Regarding claims 16, 21:

Weerackody et al. disclose wherein the buffer is adapted to store a final data frame (see col. 12 lines 1-8 which recite the frame including the end of image marker).

Regarding claim 18:

Weerackody et al. disclose wherein the data re-transmission is made only for data involving errors (see col. 7 lines 26-31).

Regarding claims 19, 24:

Weerackody et al. disclose wherein the data is transmitted in a wireless local loop (see col. 8 lines 5-13).

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For claims 2 and 11 Weerackody et al. disclose the apparatus described in paragraph 3 of this office action

For claims 2, 11, 12, 17, and 20, Weerackody et al. disclose all the subject matter of the claimed invention with the exception of wherein the buffer, the controller, transmitting terminal, and the radio frequency unit operate in a physical layer.

Sourani from the same or similar fields of endeavor teach that it is known to provide the buffer, the controller, transmitting terminal, and the radio frequency unit operate in a physical layer (see col. 4 lines 10-19 which recite the physical layer unit transmitting packets from the buffer). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide the buffer, the controller, transmitting terminal, and the radio frequency unit operating in a physical layer as taught by Sourani in the communications apparatus and method of Weerackody et al. The buffer, the controller, transmitting terminal, and the radio frequency unit operating in a physical layer can be implemented by providing the physical layer unit for transmitting packets of Sourani in the transmitter to Weerackody et al. The motivation for using the buffer, the controller, transmitting terminal, and the radio frequency unit operating in

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a physical layer as taught by Sourani in the communication apparatus and method of Weerackody et al. being that it provides more efficiency for the system since the system can recover from erroneous packet more quickly at the receiving end since re-transmission of erroneous packet being given more urgency.

6. Claims 6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weerackody et al. (6,157,612) in view of Hardy, III (5,781,598).

Regarding claims 6 and 9:

For claims 6 and 9 Weerackody et al. disclose the apparatus described in paragraph 3 of this office action.

Regarding claim 8:

Weerackody et al. disclose wherein the data is re-transmitted from the buffer before the expiration of the prescribed period of time if a negative acknowledgment is received (see col. 7 lines 26-31).

For claims 6 and 9, Weerackody et al. disclose all the subject matter of the claimed invention with the exception of wherein the data is re-transmitted from the buffer after a prescribed period of time if no acknowledgment of the transmitted data has been received as in claim 6; and a timer configured to initiate a countdown when the data is transmitted,

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wherein the countdown of the timer is stopped and reset if an acknowledgment of the transmitted data is received before the timer expires as in claim 9.

Hardy, III from the same or similar fields of endeavor teach that it is known to provide wherein the data is re-transmitted from the buffer after a prescribed period of time if no acknowledgment of the transmitted data has been received; wherein the data is re-transmitted from the buffer before the expiration of the prescribed period of time if a negative acknowledgment is received; and a timer configured to initiate a countdown when the data is transmitted, wherein the countdown of the timer is stopped and reset if an acknowledgment of the transmitted data is received before the timer expires (see col. 7 lines 26-37 and col. 9 lines 46-65). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide data being re-transmitted from the buffer after a prescribed period of time if no acknowledgment of the transmitted data has been received and a timer configured to initiate a countdown when the data is transmitted, wherein the countdown of the timer is stopped and reset if an acknowledgment of the transmitted data is received before the timer expires as taught by Hardy, III in the apparatus of Weerackody et al. The data being re-transmitted

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from the buffer after a prescribed period of time if no acknowledgment of the transmitted data has been received and a timer configured to initiate a countdown when the data is transmitted, wherein the countdown of the timer is stopped and reset if an acknowledgment of the transmitted data is received before the timer expires can be implemented by connecting the error recovery timer circuit of Hardy, III into the erroneous packet re-transmitting apparatus of Weerackody et al. The motivation for using the error recovery timer circuit as taught by Hardy, III in the apparatus of Weerackody et al. being that it provides the added feature of error recovery from asynchronous data transfer since the system can align/realign signals transmitted at different rate.

7. Claims 7, 13-15 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weerackody et al. (6,157,612) in view of Sourani (6,631,132) and further in view of Hardy, III (5,781,598).

Regarding claims 13-15 and 22-23:

For claims 13-15 and 22-23 Weerackody et al. in view of Sourani disclose the method described in paragraph 5 of this office action.

Regarding claim 7:

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Sourani disclose wherein the transmitted data stored in the buffer is stored as a final data frame in a physical layer (see col. 4 lines 10-19 which recite the physical layer unit transmitting packets from the buffer).

For claims 13-15 and 22-23, Weerackody et al. in view of Sourani disclose all the subject matter of the claimed invention with the exception of wherein step (b) comprises: terminating the re-transmission procedure if an acknowledgment signal is received; and repeatedly checking whether or not the acknowledgment signal is received, until the prescribed period of time elapses if no acknowledgment signal is received as in claim 13; wherein step (b) is repeatedly carried out until the acknowledgment signal is received as in claim 14; wherein a timer tracks the prescribed period of time and is reset when the data is re-transmitted or when an acknowledgment is received as in claim 15; wherein the stored data is re-transmitted if receipt of the data is not acknowledged within a prescribed period of time as in claim 22; and wherein the stored data is re-transmitted if a negative acknowledgment is received during the prescribed period of time as in claim 23.

Hardy, III from the same or similar fields of endeavor teach that it is known to provide wherein step (b) comprises: terminating the re-transmission procedure if an acknowledgment

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signal is received; and repeatedly checking whether or not the acknowledgment signal is received, until the prescribed period of time elapses if no acknowledgment signal is received; wherein step (b) is repeatedly carried out until the acknowledgment signal is received; wherein a timer tracks the prescribed period of time and is reset when the data is re-transmitted or when an acknowledgment is received; wherein the stored data is re-transmitted if receipt of the data is not acknowledged within a prescribed period of time; and wherein the stored data is re-transmitted if a negative acknowledgment is received during the prescribed period of time (see col. 7 lines 26-37 and col. 9 lines 46-65). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide wherein step (b) comprises: terminating the re-transmission procedure if an acknowledgment signal is received; and repeatedly checking whether or not the acknowledgment signal is received, until the prescribed period of time elapses if no acknowledgment signal is received; wherein step (b) is repeatedly carried out until the acknowledgment signal is received; wherein a timer tracks the prescribed period of time and is reset when the data is re-transmitted or when an acknowledgment is received; wherein the stored data is re-transmitted if receipt of the data is not acknowledged within

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a prescribed period of time; and wherein the stored data is re-transmitted if a negative acknowledgment is received during the prescribed period of time as taught by Hardy, III in the apparatus of Weerackody et al. in view of Sourani. The step (b) comprises: terminating the re-transmission procedure if an acknowledgment signal is received; and repeatedly checking whether or not the acknowledgment signal is received, until the prescribed period of time elapses if no acknowledgment signal is received; wherein step (b) is repeatedly carried out until the acknowledgment signal is received; wherein a timer tracks the prescribed period of time and is reset when the data is re-transmitted or when an acknowledgment is received; wherein the stored data is re-transmitted if receipt of the data is not acknowledged within a prescribed period of time; and wherein the stored data is re-transmitted if a negative acknowledgment is received during the prescribed period of time can be implemented by connecting the error recovery timer circuit of Hardy, III into the erroneous packet re-transmitting apparatus and method of Weerackody et al. in view of Sourani. The motivation for using the error recovery timer circuit as taught by Hardy, III in the apparatus and method of Weerackody et al. in view of Sourani being that it provides the added feature of error

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recovery from asynchronous data transfer since the system can align/realign signals transmitted at different rate.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Morris et al. disclose dynamic forward error correction.

Huang discloses a scalable switching network.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Monday to Friday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH



DANGTON
PATENT EXAMINER